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PEOPLE'S GARAGE
Hilo, Hawaii P. O. Box 424

Territorial Messenger Service Standardize on Trucks



The Territorial Messenger Service, agents for the Alexander Young Hotel laundry, have been one of the first, if not the first, concerns in Honolulu to standardize on delivery trucks. The above picture shows four of the trucks used by this concern. They are the Vim Light Express trucks which have become very popular on the mainland as well as in Hawaii. According to the members of the firm the truck is light and inexpensive to operate. The Young Hotel has used these trucks for safe work delivery and have also found them to be a success.

GERMAN AUTO WORKS PREPARE TO EXPAND

(By Associated Press)
AMSTERDAM.—Automobile works in Germany are preparing for expansion on an enormous scale for the production of aircraft. One of the foremost factories has just voted to increase its capital from \$6,000,000 to \$8,000,000. Special facilities have been granted by the German government for the flotation of the new shares. A circular issued by the company said: "We entered the war with large reserves for extension purposes, but this has been used up by the large demands of the war. We can no longer speak of 'expanding' our works, but must use the term 'multiplying' them."

Carbon One of Worst Ailments Of Engine Says Henry Hughes

Automobile Expert Says Carbon is Responsible for Many Evils Which are Blamed on Gasoline, Carburetor, Cooling System and Manufacturer—Carbon Gets Under Exhaust Valves and Gums Up Piston Rings So Motor Loses Compression

When asked what was one of the worst ailments of an engine the other day, Henry Hughes, the automobile expert, replied: "Carbon." When asked the reason for bringing carbon into the question he said: "The presence of carbon is not often suspected, and the evils which follow are oftentimes attributed to other than the real cause, but you can make up your mind that carbon has a lot to do with it."

"The motor appears to be sluggish, does not respond readily to the throttle, particularly on a hill, and the driver blames the gasoline, the carburetor, the cooling system and sometimes the manufacturer. But he oftentimes forgets the carbon end of it."

"He will get out the starting handle and crank away at the motor to try the compression. He finds that the compression is weak, and then blames the maker of the car for building an engine which cannot hold compression a reasonable length of time. Before long the engine begins to miss, and he blames the coils or spark plugs, and to round things up he opens the switch after a long run and the engine refuses to stop."

"Then he remembers that he had heard a distinct knock which he thought might be a loose bearing, but now he knows there is something wrong inside or the engine wouldn't overheat so badly after the careful handling he has given it. So he condemns the car and all its kind and asks his friends what the trouble is that so many ills can occur to one engine at one time."

"Carbon is the answer. It gets under the exhaust valves and gums up the piston rings so that the motor loses compression. It shorts circuits the spark plugs and the engine misses explosions. It accumulates in masses in the head of the cylinder, gets red hot and fires the mixture before the proper time. This causes knocking which is especially pronounced on a hill. When the switch is opened the motor keeps on running as it is not using the electric spark at all."

"There are many causes of carbon and one must be on his guard against all of them. The usual trouble is too much oil, but the wrong grade of oil will give carbon, as well as a poor grade. Too rich a mixture from the carburetor is another cause. If the piston rings are badly worn oil will be drawn up into the combustion chamber on the suction stroke—more carbon."

"Use Only Best Oil. The remedy is to avoid the causes given above. Use oil made by the manufacturer of established reputation, and use the oil he recommends for your car. See that oil level is correct and that the mixture from carburetor is right. If red or yellow flame is shown at compression cocks, the mixture is too rich. In spite of the best care, however, carbon will persist in forming."

"To help keep this down, inject a small quantity of kerosene in each cylinder once a week. Have motor hot when it is poured in, so that the kerosene will vaporize. Close compression cocks and crank engine over a few times, either by hand or self-starter. This compresses the vapor and forces it into the carbon. The effect of the kerosene vapor acting all night is to soften the carbon so that some of it will be ejected when the motor is again started."

"If such precautions have not been taken and cylinders are found to be carbonized the deposits may be too thick to be affected by the kerosene alone. The old method was to use scrapers, which were inserted through the valve openings. The carbon was scraped off but fell in masses on the head of the piston. Unless blown out it was carried into the muffler. If not thoroughly removed ridges of carbon were left, which became red hot and caused pre-ignition just the same."

Special Apparatus.

"The best method, aside from removing head and positive scraping, is to have the cylinders burned out with oxygen. This can be done only when special apparatus is available. The engine is started and the gasoline supply is shut off. The engine stops, having used up all the explosive mixture in the combustion space. This is to avoid an explosion when the oxygen is first introduced into the cylinder. The plugs are then re-

moved, a burning match dropped into the cylinder and the stream of oxygen turned on. This spreads to all parts of the combustion space, burning the carbon. As long as sparks are coming out the workman knows that there is still some unconsumed carbon. This process is quick and quite efficient, dismantling of motor being unnecessary."

"So bear in mind the many troubles traceable to carbon the next time you find the motor is not pulling as it should," he concluded.

MOTOR HONKS By OTTO HORNE

End play in the crankshaft is apt to first be noticed when the car is rattled down to around five miles per hour, when so-called bucking will take place, accompanied by knocking. If the play is excessive the knocking will be heard as the speed increases.

Best results can be secured from a motor-cooling system by keeping the radiator cells free from foreign matter. Particularly on long trips over bad roads the interstices of the radiator are packed with dirt and mud, retaining the heat which should be dissipated in radiation.

Every person riding, driving, pedaling or in charge of any vehicle upon any street shall, in overtaking any other vehicle, pass to the left of such vehicle and the person is charge of such vehicle being overtaken and passed shall give way to the extreme right to allow such vehicle to pass with safety.

A deposit of dust on the reflector or lens often cuts down the light to a marked degree. The owner should make a weekly habit of wiping the dust from these parts. While doing this it is a good plan to inspect the cable connection. Vibration often loosens it and the poor contact results in a loss of light and waste of current.

If you're in the least doubt about your tires, better get new ones if you are going to drive on a vacation trip. You don't want to carry the haunting thought that you have a casing or two that may be let go any minute when you are supposed to be out for enjoyment. The tires you take off may be carried as spares, and you'll be assured of a trouble-free trip.

An interesting and profitable trip that every motorist should take, but very few think of, is a trip under the hood to see the condition of things there. Inspect brake connections to see if there are any which do not get attention when the car is ciled. See if they are wearing out or weakening. Sometimes one finds grease cups that have been neglected for a long time. Also inspect the universal joint to see if it is loosening up or needs grease.

Owners of new cars to have the hood. It often is disappointing to many finish suddenly become dull while the rest of the car retains its bright finish. Once the hood finish has become "dead" it is almost impossible to bring back its luster without refinishing it. The dullness is brought about by the action of the engine heat, but is made worse by washing when the hood is hot. In order to protect the hood finish it has been found necessary by some makers to line the hood with asbestos so that the heat cannot work through. The sheet asbestos used for this is comparatively inexpensive.

In spite of the present day standardization, a number of different sized bolts are used on the motor car. It is often difficult to carry in the tool box bolts of all the sizes that may be required.

One motorist has found that it is handy to thread different sized rods the entire length, say ten or twelve inches. When a bolt is needed it can be cut from the rod and a nut or two be put on the end, making a very satisfactory bolt. These rods can be bent to make U-shaped bolts or any other required shape. Plenty of nuts can be carried right on the rods and,

MOTOR CARS CARRY MORE PERSONS THAN RAILROAD TRAINS

American transportation now must look to the motor car as its chief factor. The car has caught up with and passed the railroads in importance as a factor in transportation in this country. In a recent issue the Wall Street Journal declares that motor cars will carry many more passengers than the steam lines this year.

On a basis of 3,000,000 passenger cars in use this year, and an average mileage per car of 6,000, the motor car mileage for 1917 will be 18,000,000,000, assuming an average load of three passengers. The passenger mileage by motor for 1917 will be 54,000,000,000. Railroad traffic now amounts to 35,000,000,000 passenger miles yearly, which is less than the passenger mileage of motor cars. If we assumed an average load of two, chiefly the railroads in the thickly settled eastern portions of the country, this authority states, the big cities and the recreation regions.

Motor car competition affects the railroads in the thickly settled eastern portions of the country, this authority states, the big cities and the recreation regions.

EMBARGOES REDUCE EXPORT AUTO TRADE

The placing of embargoes by certain foreign countries has cut down export passenger car and truck business from the United States, the gross valuation with parts, of \$123,000,000 for the last twelve months being slightly less than for the previous year, although the cars were greater, numbering 89,811.

The increase is coming from countries not engaged in the war, and it is worth noting that American products last year were shipped to more than eighty different countries.

The whole be tied in a package that will not rattle around in the tool box.

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TODAY'S NEWS TODAY

SUMMER RATES OAHU RAILWAY and HALEIWA HOTEL

Thirty-day excursion ticket—between Honolulu and Waikele, Haleiwa or Kaneohe. First class, \$2.15; second class, \$1.80.
Special weekly rates at hotel during summer months, \$25.00.
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MEN of HAWAII

"MEN OF HAWAII," a biographical compilation of the men of note and substantial achievement in the Territory, which has been several months in preparation by the Star-Bulletin, is nearing completion and will be off the press for distribution about Dec. 20th. "Men of Hawaii" gives the facts of the careers of men active in the various fields of business and professional life. It is the most complete and authentic record that has ever been published in Hawaii.

More feathers in our bonnet

"Heap Big Mileage" results in much praise from the members of the Savage "Tribe." We are proud of having received hundreds of letters like the following:

12,400 miles and going strong.

"Have driven to date 12,401 miles, and by the looks of the casing it should go 5,000 miles yet. It is a Savage."—A. J. Kellogg, Los Angeles.

Over 10,000 miles.

"Have used a Savage Tire for 2½ years—have made 10,000 miles. It is still good for 2,500 more."—D. G. Durbin, El Cajon, California.

15,000 miles, still in use.

"July 12, 1915, purchased Savage Non-Skid tire. February 4, 1917, was still in use, while on opposite wheel we had worn out two other standard makes of tires—Savage has given 15,000 miles."—George & Co., Lincoln, Nebraska.

11,000 miles, Savages all round.

"Have four Savages on my car. One has gone 10,814 miles, one 7,428, one 7,419, and one 2,090. All in good condition and will get several thousand miles more from each."—D. J. Miller, Contractor, San Diego.

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